

NOTEWORTHY COLLECTIONS FROM THE YAZOO-MISSISSIPPI DELTA REGION OF MISSISSIPPI

Daniel A. Skojac, Jr.

U.S. Forest Service, Southern Research Station
Southern Hardwoods Laboratory
P.O. Box 227 Stoneville, Mississippi 38776, U.S.A.
dskojac@fs.fed.us

Charles T. Bryson

USDA-ARS
Southern Weed Science Laboratory
P.O. Box 350 Stoneville, Mississippi 38776, U.S.A.
charles.bryson@ars.usda.gov

Charles H. Walker, II

U.S. Forest Service, Southern Research Station
Southern Hardwoods Laboratory
P.O. Box 227 Stoneville, Mississippi 38776, U.S.A.

ABSTRACT

The flora of the Yazoo-Mississippi Delta Region is the least represented in the checklist of Mississippi plants currently being compiled for the state. This paper reports 20 noteworthy collections from the region and discusses their distributions within the state. *Typha angustifolia* is reported new to Mississippi and *Bowlesia incana*, *Caperonia palustris*, *Carya cordiformis*, *Carya glabra*, *Chenopodium standleyanum*, *Eichhornia crassipes*, *Hottonia inflata*, *Oplismenus setarius*, *Podophyllum peltatum*, *Polystichum acrostichoides*, *Proserpinaca palustris*, *Scirpus atrovirens*, *Senecio vulgaris*, *Sparganium americanum*, and *Spigelia marilandica* are reported new to the Yazoo-Mississippi Delta Region. Range extensions are reported for *Callicarpa americana*, *Carex intumescens*, *Carya laciniosa*, and *Menispermum canadense* within the Yazoo-Mississippi Delta Region. Of the 20 species, *Bowlesia incana*, *Caperonia palustris*, *Eichhornia crassipes*, and *Senecio vulgaris* are weeds of agricultural and humankind disturbed areas. *Carya laciniosa*, *Hottonia inflata*, and *Menispermum canadense* are plants of special concern within the state and are on the state's special plant tracking list.

RESUMEN

La flora de la región del delta del Yazoo-Mississippi es la menos representada en el catálogo de plantas de Mississippi que se está compilando actualmente para el estado. En este artículo se citan 20 colecciones notables de la región y se discute su distribución en el estado. *Typha angustifolia* se cita como nueva para Mississippi y *Bowlesia incana*, *Caperonia palustris*, *Carya cordiformis*, *Carya glabra*, *Chenopodium standleyanum*, *Eichhornia crassipes*, *Hottonia inflata*, *Oplismenus setarius*, *Podophyllum peltatum*, *Polystichum acrostichoides*, *Proserpinaca palustris*, *Scirpus atrovirens*, *Senecio vulgaris*, *Sparganium americanum*, y *Spigelia marilandica* se citan como nuevas para la región del delta de Yazoo-Mississippi. Se incrementa el área de extensión de *Callicarpa americana*, *Carex intumescens*, *Carya laciniosa*, and *Menispermum canadense* dentro de la región Yazoo-Mississippi. De las 20 especies, *Bowlesia incana*, *Caperonia palustris*, *Eichhornia crassipes*, y *Senecio vulgaris* son malas hierbas para la agricultura y de áreas alteradas por el hombre. *Carya laciniosa*, *Hottonia inflata*, and *Menispermum canadense* son plantas de especial interés en el estado y están en la lista estatal del plan especial de seguimiento.

INTRODUCTION

The Yazoo-Mississippi Delta Region is not a delta in the geomorphic sense, but rather is the floodplain of the Mississippi and Yazoo rivers. This vast alluvial plain occupies approximately 18,389 km² and covers 10 counties entirely including Bolivar, Coahoma, Humphreys, Issaquena, Leflore, Quitman, Sharkey, Sunflower, Tunica, and Washington counties and parts of 8 other counties including Carroll, DeSoto, Grenada, Holmes, Panola, Tate, Warren, and Yazoo in northwest Mississippi. The Yazoo-Mississippi Delta Region is bordered to the west by the Mississippi River and to the east by the Loess Bluff Region (Lowe 1921; Morris 1989). From its northern terminus near Memphis, Tennessee, the Yazoo-Mississippi Delta Region extends southward to the confluence of the Yazoo and Mississippi rivers near Vicksburg, Mississippi. Topography of the region is flat and drainage is slow. Extant ridges (natural levees) rise slightly above adjacent areas of lower elevation along ancient and current stream-channels, and represent the highest elevations in the region. Soils range from poorly drained, fine clays on sites of lower relief to well drained, silt-loams and sandy soils on natural levees. Construction of artificial levee systems during the last century has altered historical flooding regimes and minimized the severity of seasonal flooding events across the region.

The Yazoo-Mississippi Delta Region remains the least understood floristically and most under-collected region in the state of Mississippi (Carter et al. 1980). Poor geographic distribution data also characterize the region's flora. Significant collections from the region, however, are provided in Carter (1978), Gunn et al. (1980), and Wiseman (1982). The mass conversion of the native bottomland hardwood forests to agriculture production has hindered efforts to accurately define the area's historical floristic composition. Native forest vegetation is now mostly restricted to sites of lower relief not suited to agricultural production due to poor drainage. Species of these sites comprise the majority of taxa presented in the three works referenced earlier. Because of the desirability for row crop production, higher elevation, well-drained sites remaining in native vegetation are rare in the region. These specialized sites have yielded significant additions to the Yazoo-Mississippi Delta Region flora in recent decades (Bryson and Jones 1990; Carter et al. 1990; Rabler and Bryson 1990; Bryson and Elmore 1991; Bryson and Carter 1992; Bryson et al. 1992; Rosen et al. 2006), and provided some historical perspective on the original floristic composition of the area. Additionally, state and nation-wide geographic distribution data often preclude the Yazoo-Mississippi Delta Region in the native range of many plant species. Thus, the area apparently interrupts geographic distributions of species, whose ranges continue in areas of differing physiography adjacent to the Yazoo-Mississippi Delta Region. This is attributed partially to the edaphic characteristics of the region, but anthropogenic activities, particularly widespread conversion of natural ecosystems to agriculture, are also relevant. Collections presented by Carter et al. (1990) and those presented here from the isolated ridge sites remaining in native vegetation have bridged the native ranges of many species otherwise extirpated or omitted from the Yazoo-Mississippi Delta Region flora. Continued exploration of these sites will be required to attain an accurate floral description for the Yazoo-Mississippi Delta Region of Mississippi.

NOTEWORTHY COLLECTIONS

Listed below are noteworthy collections from the Yazoo-Mississippi Delta Region of Mississippi. Many represent significant new discoveries to the region. Others are range extensions of species considered rare or weedy within the Yazoo-Mississippi Delta first reported by Carter et al. (1990), or otherwise documented in the region by McCook and Kartesz's (2000) preliminary checklist of Mississippi plants. Distributional data are taken from Little (1971), McCook and Kartesz's (2000) checklist, and The PLANTS database (USDA, NRCS 2006). Herbarium abbreviations follow Holmgren et al. (1990) and Holmgren and Holmgren (1998), except the Southern Hardwoods Laboratory, Stoneville, MS (shl).

Bowlesia incana Ruiz & Pavon (Apiaceae). Hoary bowlesia (USDA, NRCS 2006), a non-native invasive weed, continues to spread northward in Mississippi in container plants supplied at nurseries and as contaminates of sod, mowing, and lawn maintenance equipment. Previously, this plant was only reported from a single collection in Harrison County in Mississippi (McCook & Kartesz 2000). Our collections are important because they document the northward range extension of *B. incana* in Mississippi and report it as a weed of lawns, landscape beds, woodland edges, nurseries, and no- and reduced-tillage row crop production systems in the Yazoo-Mississippi Delta Region. This weed is often misidentified in the seedling stage because of its similarity to *Ranunculus parviflorus* L., also a common weed of gardens, lawns, landscape beds, and woodland edges. In *B. incana* seedlings, the deeply lobed leaves are not toothed compared to the deeply lobed toothed leaves of *R. parviflorus*. Our vouchers represent significant range extensions northward and the first records of this species in the Yazoo-Mississippi Delta Region.

Voucher specimens: **U.S.A. MISSISSIPPI. Bolivar Co.:** Cleveland, Delta State University campus, 29 Apr 1993, *Stewart 4709* (SWSL); 29 Feb 1996, *Stewart 5379* (SWSL). **Issaquena Co.:** Grace, N of Hwy MS 14 in mowed lawn, 27 Apr 2001, *Bryson 18365 & Goodlett* (SWSL). **Washington Co.:** Leland, along Deer Creek Drive, 14 Apr 1991, *Bryson 10715 & Bryson* (SWSL); Leland NE jct. of Broad and Willeroy streets, 13 Mar 1994, *Bryson 13309 & Bryson* (SWSL); Leland, 2 blocks SE of Broad St. at 306 Garrison St. (private residence), in flower beds and lawn, T18N R7W S14, 20 Mar 2004, *Skojac 785* (shl); Stoneville, 16 Mar 2006, *Bryson 20609* (DOV, MISS, MISSA, MMNS, SWSL, USMS, VSC).

Callicarpa americana L. (Verbenaceae). American beautyberry (USDA, NRCS 2006) is a common woodland

shrub of hardwood and mixed pine-hardwood forests throughout the state. It was most likely a common understory shrub on sites with higher elevation than surrounding areas throughout the Delta prior to the conversion of these sites to row crop production. This species was first reported in the region by Carter et al. (1990) from ridge-bottom sites in two Yazoo-Mississippi Delta counties. Our vouchers more than double the number of documented sites within the Yazoo-Mississippi Delta Region where this otherwise common shrub occurs.

Voucher specimens: **U.S.A. MISSISSIPPI. Humphreys Co.:** SW of Belzoni and Gunn Bayou near Townson Lake, T15N R2W S16, well-drained ridge site supporting bottomland hardwood forest, 2 Sep 2005, *Skojac 1142* (shl). **Leflore Co.:** NW of Sidon, between Sidon cut-off and old Yazoo River run, T18N R1E S19, 1 Jul 1996, *Bryson 15400 & MacDonald* (SWSL); 16 Jun 1999, *Bryson 17254* (SWSL). **Sharkey Co.:** Delta National Forest, approx. 4 mi S of Holly Bluff, F.S. compartment 39, T11N R5W S34, bottomland hardwood forest, ridge-bottom site with notably higher relief than surrounding terrain, 26 May 2005, *Skojac 1108* (shl).

Caperonia palustris (L.) St.-Hil. (Euphorbiaceae). Sacatrapo (USDA, NRCS 2006) or Texasweed (WSSA 1989) is reported in four southern states, including neighboring Arkansas and Louisiana, but is not listed in Mississippi (USDA, NRCS 2006). McCook and Kartesz (2000) do not report vouchers of *C. palustris* from Mississippi either, but do indicate that the species has likely been introduced into the state. Our vouchers from Washington County are the first published accounts of this species from the Yazoo-Mississippi Delta Region, where it is a weed of rice and soybeans, two of the principal agricultural row crops of the region. During the past decade, *C. palustris* has become a major weed of rice production in Washington County, Mississippi.

Voucher specimens: **U.S.A. MISSISSIPPI. Washington Co.:** ca. 4 mi W of Arcola in rice field, 30 Aug 1982, *McDaniel* (SWSL); 5 mi W of Arcola in soybean field, 11 Jul 1983, *Elmore 208* (SWSL); Leland, weed in flowerbed along Cotton Drive, 28 Jul 1997, *Bryson 16076* (SWSL); Leroy Percy State Park, along S side of dirt road near ball field NE of alligator pond, T13W R5W S9, 6 Nov 2005, *Walker MS24* (shl).

Carex intumescens Rudge (Cyperaceae). Greater bladder sedge (USDA, NRCS 2006) was first reported new to the region in Carter et al. (1990). It is locally common in many bottomland hardwood forests throughout the rest of Mississippi. Our voucher represents a range extension and county record of this seemingly rare sedge in the Yazoo-Mississippi Delta Region.

Voucher specimen: **U.S.A. MISSISSIPPI. Bolivar Co.:** approx. 3.7 mi NW of Shelby, MS and ca. 2.0 mi W of US 61 in an isolated tract of bottomland hardwood forest, 33°59'N 90°48'W, T25N R6W S34, 3 Jun 2004, *Skojac 871 & Bryson* (shl, SWSL).

Carya cordiformis (Wangenh.) K. Koch (Juglandaceae). Bitternut hickory (USDA, NRCS 2006) has wide distribution across much of the eastern U.S., but was excluded from the Yazoo-Mississippi Delta Region by Little (1971). In Mississippi, it occurs in the northern half of the state on mesic to dry upland sites with other hardwoods and it is somewhat common on well-drained soils of minor stream-bottom systems as well. Our voucher is the first record of this hickory in the Yazoo-Mississippi Delta Region. Interestingly, this collection was made from a river-bordering county rather than from one bordering the Loess Bluffs, where the species is quite abundant.

Voucher specimen: **U.S.A. MISSISSIPPI. Washington Co.:** Yazoo National Wildlife Refuge, wooded tract S of Alligator Pond along extant ridge bordering slough, 17 Aug 2004, *Skojac 982* (shl).

Carya glabra (Mill.) Sweet (Juglandaceae). According to Little (1971), the native range of pignut hickory (USDA, NRCS 2006) extends across all of Mississippi with the exception of the Yazoo-Mississippi Delta Region. Our collections extend the known native range of this hickory into the Yazoo-Mississippi Delta, where it appears to be restricted to the higher elevation ridge sites in the region. It is possible the material we collected is of the *C. leioderms* Sarg. form of pignut hickory, which is of special concern in the state.

Voucher specimens: **U.S.A. MISSISSIPPI. Holmes Co.:** Hillside National Wildlife Refuge, ca. 3 mi N of Eden in woods near the Alligator Slough Nature Trail on ridge-bottom site, 29 Jul 2004, *Skojac 937* (shl). **Humphreys Co.:** SW of Belzoni and Gunn Bayou near Townson Lake, T15N R2W S16, well-drained ridge site supporting bottomland hardwood forest, 2 Sep 2005, *Skojac 1143* (shl).

Carya laciniosa (Michx. f.) Loud. (Juglandaceae). Shellbark hickory (USDA, NRCS 2006) is a scattered tree of alluvial sites north of Mississippi. According to Little (1971), its native range extends southward to

southwestern Tennessee and northeastern Arkansas along the Mississippi river. A single record of this species from DeSoto County in extreme northwest MS is reported in McCook and Kartesz's (2000) checklist of Mississippi plants. Our vouchers represent a significant range extension southward in the state. Shellbark hickory is listed on the Mississippi special plant tracking list (Mississippi Natural Heritage Program 2002).

Voucher specimens: **U.S.A. MISSISSIPPI. Bolivar Co.:** ca. 3.7 mi NW of Shelby, MS and ca. 2.0 mi W of US 61 in an isolated tract of bottomland hardwood forest, 33°59'N 90°48'W, T25N R6W S34, 3 Jun 2004, *Skojac 865 & Bryson* (SWSL, shl). **Tunica Co.:** ca. 4 mi S of Tunica; 1 mi S jct. Hwy US 61 and MS 4, then 1 mi E of Hwy US 61 on Hurt Rd., S of Hurt Rd., T5S R11W S28, N34°37.574' W 090°22.189', bottomland hardwood forest, 3 May 2006, *Skojac 1257 & Bryson* (shl).

Chenopodium standleyanum Aellen (Chenopodiaceae). Standley's goosefoot (USDA, NRCS 2006) has limited distribution in Mississippi and is known only from the Yazoo-Mississippi Delta counties of Sharkey and Leflore (McCook & Kartesz 2000; USDA, NRCS 2006). Our specimens were taken within and along the edges of bottomland hardwood forests. This habitat differs from that of the more common *C. album* L., which occurs most frequently in open fields and along row crop field margins in the Yazoo-Mississippi Delta Region, and elsewhere in the state. Both McCook and Kartesz (2000) and USDA, NRCS (2006) cite our Leflore County voucher based on duplicate material provided by the authors. Our vouchers document the Leflore County station and provide an additional county record within the Yazoo-Mississippi Delta Region, and represent the only other documented records of this species in the state.

Voucher specimens: **U.S.A. MISSISSIPPI. Bolivar Co.:** Approx. 3.7 mi NW of Shelby, MS and ca. 2.0 mi W of US 61 in an isolated tract of bottomland hardwood forest, along southern edge of forest growing on spoil material from adjacent ditch, 33°59'N 90°48'W, T25N R6W S34, 12 Aug 2004, *Skojac 971* (SWSL, shl). **Leflore Co.:** NW of Sidon, between Sidon cut-off and old Yazoo River run, T18N R1E S19, 31 Aug 1998, *Bryson 16654 et al.* (MISS, SWSL).

Eichhornia crassipes (Mart.) Solms (Pontederiaceae). Common water hyacinth (USDA, NRCS 2006) is an exotic aquatic weed native to S. America. It has invaded most southern states, where it is a problem in waterway canals, ditches, and ponds. McCook and Kartesz (2000) report this invasive aquatic weed in seven counties in southern Mississippi and NRCS (2006) reports it from an additional two counties. Our vouchers are a significant range extension northward in the state, and represent the first records of this species in the Yazoo-Mississippi Delta Region.

Voucher specimen: **U.S.A. MISSISSIPPI. Issaquena Co.:** ca. 5 air mi NE of Mayersville at jct. of Grace Road and Steele Bayou, 30 Oct 2006, *Bryson 21940 & Hoagland* (DOV, SWSL, VSC). **Leflore Co.:** ca. 6 mi SW of Greenwood on S end of Lake Roebuck and just N of Leflore County Road 512, 31 Oct 2006, *Bryson 21943* (DOV, MISS, MISSA, MMNS, SWSL, VSC). **Washington Co.:** SW of Greenville at Warfield Point Park, sandbar along Mississippi river, T18N R9W S13, 10 Oct 2005, *Walker MS11* (shl); ca. 2.2 air mi E of Glen Allan at jct. of Hwy MS 1 and Steele Bayou, 30 Oct 2006, *Bryson 21938 & Hoagland* (DOV, MISS, MISSA, SWSL, VSC); ca. 5.8 mi NE of Glen Allan at jct. of Bear Garden Road and Steele Bayou, 30 Oct 2006, *Bryson 21942 & Hoagland* (MISSA, SWSL).

Hottonia inflata Ell. (Primulaceae). American featherfoil (USDA, NRCS 2006) is a submersed aquatic native to the eastern half of the United States. Where observed, it is known to be sporadic in appearance from year to year. In Mississippi, the species is of special concern and is listed on the state's special plant tracking list (Mississippi Natural Heritage Program 2002). McCook and Kartesz (2000) report this species from neighboring Quitman County in the Delta, and a second voucher is reported from the eastern part of the state in Oktibbeha County by USDA, NRCS (2006). Our voucher represents only the third published account of this species in the state, and doubles the number of sites within the Yazoo-Mississippi Delta Region where this species occurs.

Voucher specimen: **U.S.A. MISSISSIPPI. Tunica Co.:** ca. 5.5 mi S of Tunica; lake parallel to Margie Rd., T5S R11W S33, growing in lake, 3 May 2006, *Bryson 21414 & Skojac* (ALA, DOV, FLAS, FSU, GH, LSU, MICH, MISS, MISSA, MMNS, MO, NY, SWSL, TENN, UARK, US, USCH, USMS, VDB, VPI, VSC, WIN), *Skojac 1266 & Bryson* (shl).

Menispermum canadense L. (Menispermaceae). Common moonseed (USDA, NRCS 2006) is considered rare in Mississippi (Morris et al. 1993) and is listed on the state's special plant tracking list (Mississippi Natural Heritage Program 2002). It was first reported from the Yazoo-Mississippi Delta Region by Carter et

al. (1990) from Bolivar, Coahoma, and Sunflower counties. Two other stations in Bolivar County are listed in McCook and Kartesz's (2000) checklist, representing the only other published accounts of this species in the Yazoo-Mississippi Delta Region. Our voucher from Washington County provides an additional county record for this woody vine rare to Mississippi.

Voucher specimen: **U.S.A. MISSISSIPPI. Washington Co.:** Delta Experimental Forest, along eastern side of woods directly N of W entrance onto Forest via Feather Farms Rd., T19W R7W S33, bottomland hardwood forest, 6 Nov 2004, *Skojac 1091* & *M. Skojac* (shl).

Oplismenus setarius (Lam.) Roem. & Schult. (Poaceae). Bristle basketgrass (USDA, NRCS 2006) is reported in several southern counties within the state by McCook and Kartesz (2000). It was not, however, reported in Carter's (1978) flora of Delta National Forest, most likely due to the rather isolated population from which the Sharkey County material was collected. Our vouchers represent a significant range extension northward in the state and are the first records of this species in the Yazoo-Mississippi Delta Region, where it appears restricted to well-drained ridge sites.

Voucher specimens: **U.S.A. MISSISSIPPI. Sharkey Co.:** Delta National Forest, Sweetgum Research Natural Area, T12N R5W S9, old-growth bottomland hardwood forest, 19 Sep 2003, *Skojac 775* (shl). **Washington Co.:** Yazoo National Wildlife Refuge, wooded tract S of Alligator Pond along extant ridge bordering slough, 17 Aug 2004, *Skojac 980* (shl).

Podophyllum peltatum L. (Berberidaceae). This is the first published record of mayapple (USDA, NRCS 2006) from the Yazoo-Mississippi Delta Region. Its principle distribution within the state lies east of the Delta in the rich deciduous woods of the Loess Bluffs (McCook & Kartesz 2000; USDA, NRCS 2006). It is common elsewhere in the state as well, except in the extreme lower coastal plain, where it occurs on mesic sites in upland hardwood forests and occasionally on ridge sites within minor stream-bottom forests.

Voucher specimen: **U.S.A. MISSISSIPPI. Tunica Co.:** ca. 6 mi S of Tunica; along Margie Rd., T5S R11W S33, on elevated ridge-bottom parallel to lake, 3 May 2006, *Bryson 21417* & *Skojac* (DOV, SWSL, VSC); *Skojac 1272* & *Bryson* (shl).

Polystichum acrostichoides (Michx.) Schott (Dryopteridaceae). Specimens of Christmas fern (USDA, NRCS 2006) were collected from a small group of plants growing on an elevated ridge site with notably higher relief than the surrounding terrain. This single isolated station was not reported in Carter's (1978) flora of Delta National Forest. This voucher represents the first record of Christmas fern from the Yazoo-Mississippi Delta Region. It is common elsewhere in the state, except in the extreme lower coastal plain, usually occurring in upland hardwood and mixed pine-hardwood forests.

Voucher specimen: **U.S.A. MISSISSIPPI. Sharkey Co.:** Delta National Forest, approx. 4 mi S of Holly Bluff, F.S. compartment 39, T11N R5W S34, 7 Nov 2005, *Skojac 1198* (shl).

Proserpinaca palustris L. (Haloragaceae). Marsh mermaidweed (USDA, NRCS 2006) is a polymorphic, aquatic to semi-aquatic herb of ponds, sloughs, and seasonally inundated depressions. It has a sporadic distribution within Mississippi, occurring in seven counties ranging from the extreme northern county of Alcorn to the coastal counties of Hancock and Jackson (McCook & Kartesz 2000; USDA, NRCS 2006). Our voucher is the first collection of the species from a county within the Yazoo-Mississippi Delta Region, where it was found in a depression at the edge of a beaver damaged area of bottomland hardwoods.

Voucher specimen: **U.S.A. MISSISSIPPI. Washington Co.:** ca. 5.0 mi W of Hollandale on Hwy MS 12 at Leroy Percy State Park; ca. 0.3 mi W of Park entrance in woods S of Hwy 12 and E of West Park Rd., T15N R7W S17, 12 Jun 2006, *Skojac 1342* (SWSL, shl).

Scirpus atrovirens Willd. (Cyperaceae). Green bulrush (USDA, NRCS 2006) is locally common in the northern third of Mississippi, excluding the Yazoo-Mississippi Delta Region. McCook and Kartesz (2000) and USDA, NRCS (2006) list *S. atrovirens* from six north-central Mississippi counties outside of the Yazoo-Mississippi Delta Region. This voucher represents the first record of this species in the Yazoo-Mississippi Delta, where it is apparently restricted to wet open areas adjacent to a swamp predominated with *Taxodium distichum* (L.) Richard and *Salix nigra* Marshall.

Voucher specimen: **Bolivar Co.:** SE of Rosedale, ca. 1.5 mi SE jct. Hwy MS 1 and MS 8, 17 Jun 1996, *Bryson 15343* & *Carter* (DOV, MISS, MISSA, MMNS, MO, SWSL, VSC).

Senecio vulgaris L. (Asteraceae). Common groundsel (WSSA 1989) or old-man-in-the-spring (USDA, NRCS 2006) is a common weed of agricultural and non-agricultural areas throughout most of the United States; however, it was undetected in the Yazoo-Mississippi Delta Region by Gunn et al. (1980) and others. McCook and Kartesz (2000) and USDA, NRCS (2006) report *S. vulgaris* from Mississippi but do not provide data. This voucher represents the first collection of this species in the Yazoo-Mississippi Delta Region, where it was found locally on clay soils in no- and reduced-tillage cotton and soybean fields in association with *Alopecurus carolinianus* Walt., *Bowlesia incana*, *Conyza canadensis* (L.) Cronq., *Coronopus didymus* (L.) Sm., *Lamium amplexicaule* L., *Myosurus minimus* L., *Oenothera laciniata* Hill, and other early season weeds commonly found in reduced-tillage row crop production systems.

Voucher specimen: **U.S.A. MISSISSIPPI. Washington Co.:** 2.5 mi NE of Stoneville, W side of Napanee Rd., T19N R7W sect. 36; locally common weed on edge of no-till soybean field, 6 Apr 2006, Bryson 20617 (ALA, DOV, MICH, MISS, MISSA, MMNS, MO, SWSL, UARK, USMS, VDB, VSC, shl).

Sparganium americanum Nutt. (Sparganiaceae). Threesquare burreed (WSSA 1989) or American burweed (USDA, NRCS 2006) is reported from 9 Mississippi counties (McCook & Kartesz 2000; USDA, NRCS 2006) excluding the Yazoo-Mississippi Delta Region. This voucher represents the first collection of this species to the Yazoo-Mississippi Delta Region, where it was found locally in a ditch and small oxbow lake in association with *Hottonia inflata* and *Hydrocotyle ranunculoides* L. and surrounded by *Taxodium distichum*, *Salix nigra* and *Styrax americana* Lamarck.

Voucher specimen: **U.S.A. MISSISSIPPI. Tunica Co.:** 5.5 mi S of Tunica; lake parallel to Margie Rd., T5S R11W S33, growing in lake, 3 May 2006, Bryson 21416 & Skojac (DOV, SWSL, VSC), Skojac 1267 & Bryson (shl); 3 Oct 2006, Bryson 21928 (MISS, MISSA, SWSL).

Spigelia marilandica L. (Loganiaceae). Indian pink or woodland pinkroot (USDA, NRCS 2006) is a common herb of rich woodland sites. In Mississippi, it occurs on mesic upland sites and on elevated ridges within minor stream-bottom systems. This species has wide distribution throughout the state but is not reported from the Yazoo-Mississippi Delta Region (McCook & Kartesz 2000). Our voucher is the first record of this species from the region, where it appears restricted to well-drained ridge bottom sites.

Voucher specimen: **U.S.A. MISSISSIPPI. Tunica Co.:** ca. 6 mi S of Tunica along Margie Rd., T5S R11W S33, elevated ridge-bottom parallel to lake, 3 May 2006, Skojac 1274 & Bryson (shl).

Typha angustifolia L. (Typhaceae). Narrowleaf cattail (USDA, NRCS 2006) has limited distribution in the southeastern U.S. The species is reported from the neighboring states of Arkansas, Louisiana and Tennessee (USDA, NRCS 2006), but is not included in the preliminary checklist of Mississippi plants being compiled by McCook and Kartesz (2000). Our voucher from the Yazoo-Mississippi Delta Region is the first record of the species in the state of Mississippi.

Voucher specimen: **U.S.A. MISSISSIPPI. Washington Co.:** 0.5 mi S of southern entrance onto Delta Experimental Forest, in ditch on E side of Experiment Station Rd., 28 May 2003, Skojac 724 (shl).

ACKNOWLEDGMENTS

We thank Richard Carter, J. Paige Goodlett, Robert Hoagland, John R. MacDonald, Sidney McDaniel, Robert Stewart, and Randy Warren for help with field work. The authors thank Samuel W. Rosso, Lucile M. McCook and an anonymous reviewer for helpful comments on the manuscript.

REFERENCES

- BRYSON, C.T. and C.D. ELMORE. 1991. Two weedy species, *Ammoselinum butleri* (Umbellifereae) and *Lepidium austrinum* (Crucifera), new to Mississippi. Sida 14:506–508.
- BRYSON, C.T. and S.D. JONES. 1990. *Carex comosa* (Cyperaceae), new to Mississippi. Sida 14:311–312.
- BRYSON, C.T. and R. CARTER. 1992. Notes on *Cyperus* and *Kyllinga* (Cyperaceae) in Mississippi with records of six species new to the state. Sida 15:119–124.

- BRYSON, C.T., R.F.C. NACZI, and S. McDANIEL. 1992. Notes on noteworthy records of *Carex* (Cyperaceae) from the southeastern United States. *Sida* 15:125–135.
- CARTER, J.R. 1978. A floristic study of the Delta National Forest and adjacent areas. M.S. thesis, Department of Botany, Mississippi State University, Mississippi State. 79 p.
- CARTER, J.R., M.W. MORRIS, and C.T. BRYSON. 1990. Some rare or otherwise interesting vascular plants from the Mississippi Delta Region of Mississippi. *Castanea* 55:40–55.
- GUNN, C.R., T.M. PULLEN, E.A. STADELBACHER, J.M. CHANDLER, and J. BARNES. 1980. Vascular flora of Washington County, Mississippi, and environs. Science and Education Administration, U.S. Department of Agriculture, New Orleans, LA.
- HOLMGREN, P.K., N.H. HOLMGREN, and L.C. BARNERTT (eds.). 1990. Index herbariorum. Part 1: The Herbaria of the world, 8th ed. New York Botanical Garden, Bronx.
- HOLMGREN, P.K. and N. H. HOLMGREN. 1998 onwards (continuously updated). Index herbariorum. New York Botanical Garden. Web site: <http://sciweb.nybg.org/science2/IndexHerbariorum.asp>
- LITTLE, E.L. 1971. Atlas of United States Trees. Vol. I. Conifers and important hardwoods. U.S. Department of Agriculture, Forest Service Misc. Publ. No. 1146. U.S. Government Printing Offices, Washington, D.C.
- LOWE, E. N. 1921. Plants of Mississippi. Mississippi State Geological Survey. Bulletin No.17. 292p.
- McCOOK, L.M., and J. KARTESZ. 2000. A preliminary checklist of the plants of Mississippi. Website: herbarium.olemiss.edu/checklist.html.
- MISSISSIPPI NATURAL HERITAGE PROGRAM. 2002. Special Plants Tracking List. Museum of Natural Science, Mississippi Dept. of Wildlife, Fisheries, and Parks, Jackson, MS. 8 pp. Website: mdwfp.com/museum/downloads/plant_tracking.pdf.
- MORRIS, M. W. 1989. *Spiranthes* (Orchidaceae) in Mississippi. *Selbyana* 11:39–48.
- MORRIS, M.W., C. T. BRYSON, and R.C. WARREN. 1993. Rare vascular plants and associate plant communities from Sand Creek chalk bluffs, Oktibbeha County, Mississippi. *Castanea* 58:250–259.
- RABLER, R.K. and C.T. BRYSON. 1990. *Montia linearis* (Portulacaceae), new to Mississippi. *Sida* 14:310–311.
- ROSEN, D.J., R. CARTER, and C.T. BRYSON. 2006. The spread of *Cyperus entrerianus* (Cyperaceae) in the southeastern United States and its invasive potential in bottomland hardwood forests. *Southeastern Naturalist* 5:333–344.
- USDA, NARCS. 2006. Plants database. <http://plants.usda.gov>. Accessed October 2006.
- WISEMAN, J.B., Jr. 1982. A study of the composition, successional relationships, and floristics of Mississippi River floodplain forests in parts of Washington, Bolivar, and Sharkey counties, Mississippi. PhD dissertation, Department of Biological Sciences, Mississippi State University, Mississippi State.
- WSSA. 1989. Composite list of weeds. Weed Sci. Soc. Amer. Champaign, IL.